

What is Claimed is:

1. A D.C. brushless voice-coil motor, comprising:

a circuit board having printed circuits located thereon and at least two electric power supply input contacts;

5 at least two induction coils wound radially and located on the circuit board;

a magnetic element having a plurality of magnetic poles arranged in a co-plane fashion and being disposed above the induction coils;

10 at least two magnetic pins being magnetism conductive and located between the circuit board and the magnetic element, and also being disposed between the induction coils, and becoming magnetized when contact the magnetic element; and

a controller located on the circuit board and connected electrically to the induction coils for activating the induction coils to form magnetic poles;

15 wherein the induction coils generate magnetism to become magnetic poles to repulse the magnetic element when electric current flows through the induction coils thereby enabling the magnetic element to generate rotational kinetic energy.

2. The D.C. brushless voice-coil motor of claim 1 further having a casing made of a material which is magnetism non-conductive.

3. The D.C. brushless voice-coil motor of claim 2, wherein the casing includes a base plate and an upper cap.

20 4. The D.C. brushless voice-coil motor of claim 3, wherein the upper cap has an aperture formed at the center of a top wall thereof and an opening located on a side wall at the bottom end thereof.

5. The D.C. brushless voice-coil motor of claim 1, wherein the circuit board has a spindle disposed at the center thereof.

25 6. The D.C. brushless voice-coil motor of claim 1 further having a guard ring located between the circuit board and the magnetic element.

7. The D.C. brushless voice-coil motor of claim 6, wherein the guard ring is made of a material which is magnetism non-conductive.

8. The D.C. brushless voice-coil motor of claim 6, wherein the guard ring further has a first bore and a second bore for holding the induction coils, a third bore for holding the spindle, a fourth bore for holding the controller, and a fifth bore and a sixth bore for holding the magnetic pins.

9. The D.C. brushless voice-coil motor of claim 1, wherein the circuit board has an electric connection port extended outwards through the opening of the casing, the electric connection port having electric power supply input contacts located thereon.

10. The D.C. brushless voice-coil motor of claim 1, wherein the magnetic force direction of the induction coils is axial.

11. The D.C. brushless voice-coil motor of claim 1, wherein the magnetic force direction of the magnetic element is axial.

12. The D.C. brushless voice-coil motor of claim 1, wherein the controller is a microprocessor.

13. The D.C. brushless voice-coil motor of claim 1 further having a rotary element disposed above the magnetic element for rotating with the magnetic element to output rotational power.

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